REMARKS

After the foregoing amendments, claims 1 through 16 are currently pending in this application. Claims 1, 3-5 and 11-16 have been amended to more clearly define the scope of the present invention. Applicant submits that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 U.S.C. § 102(a)

Examiner has rejected claims 11-14 under 35 U.S.C. §102(a) as being anticipated by Shapira (International Publication No. WO 02/15326).

With respect to claim 11, claim 11 as presently amended recites the steps of an RNC computing tilt information in real-time based on actual conditions in a wireless communication system considering an affect that tilting a beam may have on other base stations under the control of the RNC and the base station dynamically adjusting a beam in a vertical dimension based on the tilt information.

Shapira discloses a scheme of vertical beam tilting for reducing the inter-sector interference created by side lobes of a beam. In order to reduce the inter-sector interference, Shapira utilizes a vertical beam tilting. However, as the Examiner indicated with respect to claims 1-10 and 15-16, Shapira fails to teach a scheme of computing tilt information by the RNC for tilting a beam in real-time

based on actual conditions in a wireless communication system considering an affect that tilting a beam may have on other base stations under the control of the RNC, as claimed. Accordingly, claim 11 and its dependent claims, claim 12-15, are not anticipated by Shapira.

In addition, with respect to claim 13, Shapira does not disclose a scheme of adjusting a beam to account for variations in elevation of WTRUs. As shown in Figure 5, the base station adjusts the beam for a particular WTRU based on the elevation of the WTRU to enhance the communication link, as claimed in claim 13. In contrast, Shapira discloses a scheme of vertical beam tilting for reducing interference (inter-sector interference caused by side lobes) by increasing the gain but tilting the beam in a vertical dimension. In Shapira, the beam tilting is not adjusted to account for the different elevation of the WTRUs. Accordingly, claim 13 is not anticipated by Shapira.

With respect to claim 14, Shapira also fails to disclose a scheme of beam dithering for breaking a null area. As shown in Figure 7 of the present invention, the beam is dithered such that the null area caused by interference of two or more signals may move around the area instead of stay in a specific area. By dithering a beam, even though the null area is not completely removed, the null area may not stay in the same area for a long period of time. Shapira fails to teach such a scheme to break the null area. Shapira discloses that tilt of the beam is adjusted to

decrease any overlapping interference occurring between the beam pattern of adjacent cells (See page 15 lines 5-8). However, such disclosure is too remote to teach a scheme of beam dithering to break up null areas caused by interfering signals. Accordingly, claim 14 is not anticipated by Shapira. Withdrawal of the rejectin under 35 U.S.C. 102(a) is respectfully requested.

Claim Rejections - 35 U.S.C. § 103(a)

Examiner has rejected claims 1-10, 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Shapira in view of Malladi et al. (U.S. Publication No. 2005/0130693, hereinafter "Malladi").

With respect to claim 1, claim 1 as presently amended recites an RNC configured to generate tilt information for dynamically tilting a beam considering an affect that tilting a beam may have on other base stations to optimize transmission between the base station and a WTRU.

As indicated by the Examiner, Shapira fails to disclose an RNC configured to generate tilt information. However, the Examiner asserts that Malladi teaches an RNC for controlling the dynamic adjustment of the beam. Applicant respectfully disagrees.

Malladi discloses a method for transmit power control by the RNC in a link imbalance condition. In a link imbalance condition, the RNC monitors pilot signal

strength and determines whether to increase or decrease the target pilot SNR. The portion (paragraph 0028) of Malladi cited by Examiner discloses that "the function of the RNC may be performed by the Node-B", and nothing more. Neither Malladi nor Shapira discloses or teaches an RNC configured to generate tilt information for dynamically tilting a beam considering an affect that tilting a beam may have on other base stations. Accordingly, claim 1 and its dependent claims, claims 2-10, are not unpatentable over Shapira in view of Malladi.

Moreover, with respect to claims 6 and 7, as indicated hereinbefore, Shapira fails to disclose a scheme of dynamic beam tilting to account for the elevation of WTRUs and beam dithering for breaking a null area. Therefore, claims 6 and 7 (and claims depending on claim 7), are not unpatentable over Shapira in view of Malladi.

With respect to claim 15, claim 15 as presently amended recites a base station configured to dynamically adjust a beam in at least a vertical dimension based on tilt information which is generated by considering an affect that tilting a beam may have on other base stations to optimize transmission between the base station and at least one WTRU. As stated above, Malladi is related to transmit power control in a link imbalance condition and the cited portion of Malladi does not teach a base station configured to generate tilt information considering an affect of beam tilting on other base stations. The claimed feature is not disclosed in Shapira

or in Malladi. Accordingly, claim 15 and its dependent claim, claim 16, are not unpatentable over Shapira in view of Malladi. Withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

In view of the foregoing amendment and remarks, Applicant respectfully submits that the present application, including claims 1 through 16, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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